

# **SIMCITY & PLANNING**

## **ABSTRACT**

This module covers the educational concepts of design, problem solving, critical thinking and group decision making. Students are given a pre-built scenario within the software program SIMCITY\* and asked to try and improve the situation by various techniques. All activities begin with students looking at a city that contains poor zoning and transportation problems. It becomes their task to attempt to improve the city by using only transportation solutions, zoning solutions or a combination of both.

The module is broken into three activities. Each activity could be used independently or could occur at the same time within a given classroom setting depending on available equipment and materials. The activities could likewise be done in small groups or pairs of students, again depending on equipment as well as the teacher's goals and time permitted.

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# TABLE OF CONTENTS

## **TEACHER REFERENCE**

Introduction and Loading Instructions.....	4
Activity Preparation.....	6
Activity 1: Transportation.....	8
Activity 2: Zoning.....	11
Activity 3: Transportation and Zoning.....	14
Optional Enhancements for the Activities.....	17
National Education Standards (Science and Technology).....	18

## **STUDENT HANDOUTS**

Activity Preparation: Student Instructions.....	22
Activity 1: Student Instructions and Worksheets.....	35
Activity 2: Student Instructions and Worksheets.....	41
Activity 3: Student Instructions and Worksheets.....	47
Macintosh Hot Keys.....	55
IBM Hot Keys.....	56

<b>VOLUNTEER'S PAGE.....</b>	<b>57</b>
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## **Activity Table for TRAC PAC 2: SIMCITY and Planning**

<b>Activity</b>	<b>Description</b>	<b>National Education Standards Emphasized by Each Activity (Science and Technology)</b>	<b>Transportation Background Material</b>	<b>Page</b>
Activity Preparation	Shows students how to “play” SIMCITY and interpret the different results from the game.	Identify a problem Science as Inquiry Others (see Appendix p. 18)	Brief explanation of the value of animations from simulation models such as Synchro or Netsim.	6
Transportation	Beginning with a city that is performing terribly, students try to improve the city’s state by using transportation options only.	Science as inquiry Propose designs and choose between alternative solutions	The wide range of multimodal solutions that can be considered (transportation demand management, transit improvements, capacity increases, and operational changes) juxtaposed with the limits of each (e.g. the fact that a light rail line requires a certain ridership to be sustaining)	8
Zoning	Beginning with the same bad city, students improve the quality of life by changing the zoning (the location and quantity of commercial, residential, and public development).	Abilities of a technological world Technology problem-solving and decision-making tools Communicate the Problem, process, and solution Others (see Appendix p 18)	The role of land use in transportation improvements, including (a) how land use or zoning can influence the success of a particular mode (e.g. the relationship between population density and transit) and (b) the role of zoning in the transportation planning process	11
Transportation and Zoning	Students improve the quality of life for a bad city by changing both transportation and zoning options.		Examples of where transportation and land use coordination have or have not occurred. For a government class, the coordination required between state and local (city or county) bodies should be mentioned, especially in instances where zoning authority is local and transportation authority is at the state level.	14

The *grade level* for all SIMCITY activities is middle school or high school social studies and high school technology. Classes with additional time may choose to spend additional time on the last activity (transportation and zoning) and to emphasize the challenge associated with making both transportation and zoning improvements.

# **SIMCITY & PLANNING**

## **INTRODUCTION**

SIMCITY is a software program that allows students the opportunity to use their skills managing a city. A city (Tracville) has been developed for this module that has a population of around 42,000 and some unhappy residents (Sims) due to poor transportation, bad road conditions, poor zoning management, etc. The task assigned to students is to improve the plight of these residents by using different methods of attack to make life better.

The module is divided into three activities, each starting with the same city of Tracville with the goal to improve its living conditions, decrease its transportation problems, and promote growth by twenty-five percent in a three year period. Depending on available equipment and time these activities could be done by the class in sequence or the class could be divided into three groups with each group performing one of the activities, either with multiple users at a computer or by student pairs.

In the real world of city management, transportation and zoning issues should go hand-in-hand with decision making for future growth and satisfied residents. However, it is often the case that transportation decisions such as where to build roads, place intersections, bus stops, mass transport, etc. are made without a close working relationship with the people who make decisions about zoning or re-zoning land for commercial, industrial, or residential use.

It is possible to achieve the goals of this module by making primarily transportation decisions or primarily zoning ones. The best results, however, will be obtained when one looks at both sets of issues at the same time. By having students compare their results in each of these three methods of attack, their conclusions should mirror the reality of today's best methods of decision making in these areas.

# SIMCITY & PLANNING

## LOADING

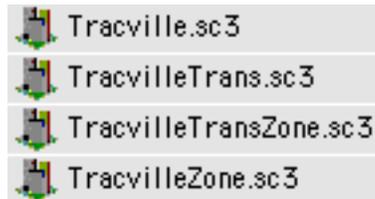
## INSTRUCTIONS

SIMCITY Software should be first loaded onto the machines that will be used for these activities. Insert the CD ROM into the machine and follow the installation instructions given by the SIMCITY directions for your particular machine (IBM, Mac, etc.). After installation is complete you will need to remove the SIMCITY CD and insert the TRACPAC CD to install the files developed for these activities.

Open the TRACPAC CD and find the folder called TRACPAC Cities.



The four files within this folder



should then be transferred to your computer and placed in the SIMCITY folder



When you are actually ready to run the SIMCITY simulation software for an activity, you will need to have the original SIMCITY CD in the CD ROM drive.

# **SIMCITY & PLANNING ACTIVITY PREP**

## **ACTIVITY TABLE**

<b>Teacher Prep Time</b>	10 minutes
<b>Class Time</b>	40 minutes
<b>Grade/Course</b>	8 - 12
<b>Technology</b>	Hi
<b>Standards Met</b>	See p. 18

## **INTRODUCTION**

Since each of the activities begin with loading the same file and follow the same general instructions, this set of instructions is pertinent to each activity and teaches one the basics of SIMCITY manipulation. This preparation activity need only be done once for any given activity within the module.

## **OBJECTIVE**

The objective of this activity is to acquaint the first time user of SIMCITY with the basic tools for beginning the use of the software, as well as the opportunity to evaluate the general health of a city needed for the activities of this module.

## **BACKGROUND**

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this module, we will focus primarily on the impact of transportation and zoning decisions.

## **MATERIALS**

Computer with SIMCITY and Tracville files installed  
SIMCITY CD  
Copy of Activity Prep instructions for each student or student group  
Copy of Hot Keys for computer platform used

## **SETUP**

Students may work at a computer in pairs or in groups of four to five, depending on your goals and equipment. Fewer students per computer obviously allows for a more hands on experience, yet groups of four to five yield an excellent opportunity for discussion and group decision making. It is recommended that if these activities one through three are done in pairs that you consider having different pairs do different activities and then compare results.

## **PROCEDURE**

The procedure for this activity is located in the Appendix of this manual, suitable for duplication for student groups. Students are strongly encouraged to take notes on the city's status on the Notes page provided.

It is recommended that the handouts for this Activity Prep be given to students for reading in advance of the actual activity. Additional time spent here may make the rest of each activity go more smoothly and be more meaningful. The time quoted in the Activity table for this Preparation phase is dependent on student's prior knowledge and experience with computers and with software similar to SIMCITY. The learning curve will be steeper for some than others.

Since finances are a major part of any city management, you may wish to point out to your students how to reach a **Budget Tutorial** from within the program. Instructions for this are found near the last page of the student handouts for this activity

# **SIMCITY & PLANNING**

## **ACTIVITY 1:**

# **TRANSPORTATION**

### **ACTIVITY TABLE**

<b>Teacher Prep Time</b>	10 minutes
<b>Class Time</b>	30 minutes
<b>Grade/Course</b>	8 - 12
<b>Technology</b>	Hi
<b>Standards Met</b>	See p. 18

### **INTRODUCTION**

The purpose of this activity is to allow students to attempt to solve many of the problems of Tracville by making primarily decisions regarding transportation. Other decisions such as insertion of schools, police stations, fire stations, power, water, etc. will also have to be made, since most problems cannot be solved in a void. However, the main goal is to improve transportation and should leave issues like rezoning areas for the zoning activity.

### **OBJECTIVE**

The objective is to improve transportation problems within the city, improve the overall health or 'aura' of the city, as well as promote a growth of twenty-five percent of the city's population. This should be accomplished within a three year period of time.

### **BACKGROUND**

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on transportation decisions.

**MATERIALS**

Computer with SIMCITY and Tracville files installed  
SIMCITY CD  
Copy of Activity One instructions for each student or student group

**SETUP**

Students may work at a computer in pairs or in groups of four to five, depending on your goals and equipment. Fewer students per computer obviously allows for a more hands on experience, yet small groups yield an excellent opportunity for discussion and group decision making. It is recommended that if these activities one through three are done in pairs that you consider having different pairs do different activities and then compare results. This could also be done with the larger groups.

**PROCEDURE**

The procedure for this activity is located in the Appendix of this manual, suitable for duplication for student groups.

When students begin this activity, it is recommended that they make some of their first changes while in 'pause' mode. They should also be reminded that when time is allowed to flow, they can adjust the rate of that flow.

As the teacher you can decide if you would like for the disasters option to be on or off for the activity. The default setting is on, and makes the activity more realistic and exciting, but may also tend to frustrate some students. To cut off the disasters option, click on the 'Change Settings' icon on the Tracville main page, select Preferences, and uncheck the Disasters box.



There is at least one person's solution to Tracville's problems using transportation decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleTrans. Do not save this file if any changes are made to it.

## ACTIVITY 1 - QUESTIONS AND CONCLUSIONS

1. What was the population of Tracville at the end of three years?

A 25% increase in population over 3 years would put Tracville at around 53,000.

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2. How successful were you in improving traffic congestion and other transportation issues?

Answers here will vary, but some congestion improvement and fewer complaints should be evident.

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3. How successful were you in improving the over all 'aura' or health of the city?

Again the answers will vary. Part of what students might address are the number of petitioner complaints or compliments regarding the city status.

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4. What were the primary methods you used in solving the transportation problems? (e.g. roads, highways, trains, subways)

Typical answers will include building new roads, adding bus stops, train or subway systems, as well as increasing the amount of funds used to address transportation issues.

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5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds ~\$20,000 would be in range      Income ~\$11,000 to \$12,000 would be fine

Expenses Hopefully less than the Income, but typically not      Loans Try to limit loans to \$30,000

6. If you were to repeat this exercise, what would you do differently?

Expect to be different with each group.

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7. Be prepared to share this information with your class or other groups.

# SIMCITY & PLANNING

## ACTIVITY 2: ZONING

### ACTIVITY TABLE

<b>Teacher Prep Time</b>	10 minutes
<b>Class Time</b>	40 minutes
<b>Grade/Course</b>	8 - 12
<b>Technology</b>	Hi
<b>Standards Met</b>	See p. 18

### INTRODUCTION

The purpose of this activity is to allow students to attempt to solve many of the problems of Tracville by making primarily decisions regarding zoning. Other decisions such as insertion of schools, police stations, fire stations, power, water, etc. will also have to be made, since most problems cannot be solved in a void. However, the main goal is to improve transportation issues and the health of the city by making changes in the zoning of various areas within the city.

### OBJECTIVE

The objective is to improve transportation problems within the city, improve the overall health or ‘aura’ of the city, as well as promote a growth of twenty-five percent of the city’s population. This should be accomplished within a three year period of time.

### BACKGROUND

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on zoning decisions.

### MATERIALS

Computer with SIMCITY and Tracville files installed  
 SIMCITY CD  
 Copy of Activity Two instructions for each student or student group

## SETUP

Students may work at a computer in pairs or in groups of four to five, depending on your goals and equipment. Fewer students per computer obviously allows for a more hands on experience, yet small groups yield an excellent opportunity for discussion and group decision making. It is recommended that if these activities one through three are done in pairs that you consider having different pairs do different activities and then compare results. This could also be done with the larger groups.

## PROCEDURE

The procedure for this activity is located in the Appendix of this manual, suitable for duplication for student groups.

When students begin this activity, it is recommended that they make some of their first changes while in 'pause' mode. They should also be reminded that when time is allowed to flow, they can adjust the rate of that flow.

As the teacher you can decide if you would like for the disasters option to be on or off for the activity. The default setting is on, and makes the activity more realistic and exciting, but may also tend to frustrate some students. To cut off the disasters option, click on the 'Change Settings' icon on the Tracville main page, select Preferences, and uncheck the Disasters box.



There is at least one person's solution to Tracville's problems using zoning decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleZone Do not save this file if any changes are made to it.

## ACTIVITY 2 - QUESTIONS AND CONCLUSIONS

1. What was the population of Tracville at the end of three years?

A 25% increase in population over 3 years would put Tracville at around 53,000.

2. How successful were you in improving traffic congestion and other transportation issues?

Answers here will vary, but some congestion improvement and fewer complaints should be evident.

3. How successful were you in improving the over all 'aura' or health of the city?

Again the answers will vary. Part of what students might address are the number of petitioner complaints or compliments regarding the city status.

4. Describe the primary methods you used in trying to make zoning decisions have an impact on transportation improvement.

Typical responses should involve such things as rezoning dense industrial away from residential, placing schools and health care near residential, but not adjacent to primary roads such that it slows traffic flow.

Creating commercial areas close to residential, and trying to reduce overall driving distances might help.

5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds ~\$20,000 would be in range

Income ~\$11,000 to \$12,000 would be fine

Expenses Hopefully less than the Income, but typically not

Loans Try to limit loans to \$30,000

6. If you were to repeat this exercise, what would you do differently?

Expect to be different with each group.

7. Be prepared to share this information with your class or other groups.

# **SIMCITY & PLANNING**

## **ACTIVITY 3:**

### **TRANSPORTATION**

### **& ZONING**

#### **ACTIVITY TABLE**

<b>Teacher Prep Time</b>	10 minutes
<b>Class Time</b>	50 minutes
<b>Grade/Course</b>	8 - 12
<b>Technology</b>	Hi
<b>Standards Met</b>	See p. 18

#### **INTRODUCTION**

The purpose of this activity is to allow students to attempt to solve many of the problems of Tracville by making decisions regarding both transportation and zoning solutions hand in hand. Other decisions such as insertion of schools, police stations, fire stations, power, water, etc. will also have to be made, since most problems cannot be solved in a void.

#### **OBJECTIVE**

The objective is to improve transportation problems within the city, improve the overall health or 'aura' of the city, as well as promote a growth of twenty-five percent of the city's population. This should be accomplished within a three year period of time.

#### **BACKGROUND**

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on making simultaneous decisions involving both transportation and zoning.

## MATERIALS

Computer with SIMCITY and Tracville files installed

SIMCITY CD

Copy of Activity Three instructions for each student or student group (if done independently)

## SETUP

Students may work at a computer in pairs or in groups of four to five, depending on your goals and equipment. Fewer students per computer obviously allows for a more hands on experience, yet small groups yield an excellent opportunity for discussion and group decision making. It is recommended that if these activities one through three are done in pairs that you consider having different pairs do different activities and then compare results. This could also be done with the larger groups.

## PROCEDURE

The procedure for this activity is located in the Appendix of this manual, suitable for duplication for student groups.

When students begin this activity, it is recommended that they make some of their first changes while in 'pause' mode. They should also be reminded that when time is allowed to flow, they can adjust the rate of that flow.

As the teacher you can decide if you would like for the disasters option to be on or off for the activity. The default setting is on, and makes the activity more realistic and exciting, but may also tend to frustrate some students. To cut off the disasters option, click on the 'Change Settings' icon on the Tracville main page, select Preferences, and uncheck the Disasters box.



There is at least one person's solution to Tracville's problems using both transportation and zoning decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleTransZone Do not save this file if any changes are made to it.

## ACTIVITY 3 - QUESTIONS AND CONCLUSIONS

1. What was the population of Tracville at the end of three years?

A 25% increase in population over 3 years would put Tracville at around 53,000.

2. How successful were you in improving traffic congestion and other transportation issues?

Answers here will vary, but some congestion improvement and fewer complaints should be evident.

3. How successful were you in improving the over all 'aura' or health of the city?

Again the answers will vary. Part of what students might address are the number of petitioner complaints or compliments regarding the city status.

4. Describe the primary methods you used to improve transportation issues through the zoning and transportation decisions made.

Expectations here would be a combination of rezoning areas such as high industrial away from residential, coupled with increasing size of roads and improving mass transit. Increasing transportation funds will be necessary, especially to maintain any mass transit systems.

5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds ~\$20,000 would be in range

Income ~\$11,000 to \$12,000 would be fine

Expenses Hopefully less than the Income, but typically not

Loans Try to limit loans to \$30,000

6. If you were to repeat this exercise, what would you do differently?

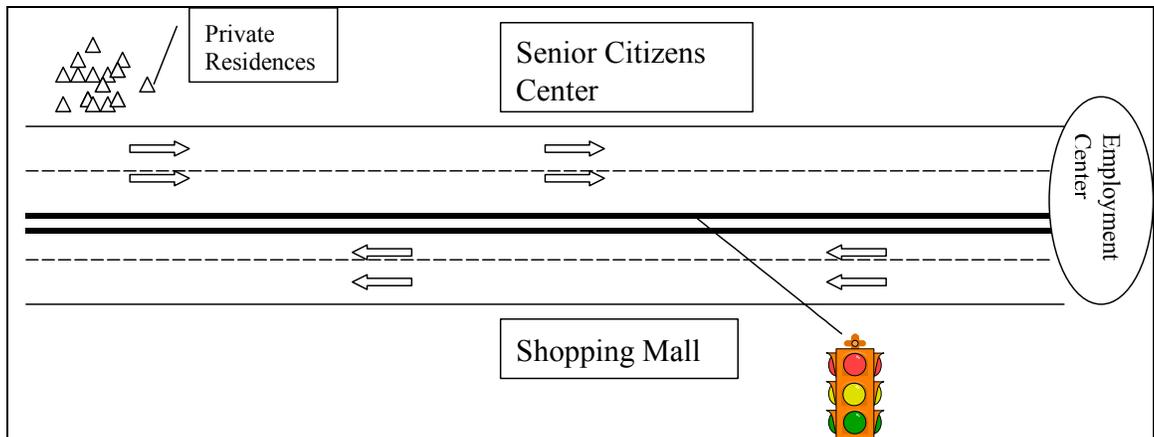
Expect to be different with each group.

7. Be prepared to share this information with your class or other groups.

# OPTIONAL ENHANCEMENTS

The SIMCITY activities are self contained--no additional data are required. The disadvantage, however, is that students may find more meaning if they can see the same concepts applied to their own community. Teachers with additional class time and preparation time may consider two possible enhancements:

- *Discuss a proposed transportation improvement that has been controversial.* There may be a particular improvement -- such as the construction of a new road, the widening of an existing road, the construction of another transit stop, the construction of a new rail line, or increased funding for a transit agency -- that has been debated in the local newspaper. Students can use media reports from the Web and newspapers about an improvement and then be asked to do the following:
  - identify key constituents (e.g. local business owners, residents, environmental interests, etc.)
  - identify the positions held by those constituents (for, against, want a different location, etc.)
  - evaluate the argument made by each of the constituencies: are supporting data available?
  - determine which groups were most likely satisfied by the decision that was ultimately made
  - comment on whether or not they agree with the decision
  
- *conduct a "role play" with the proposed transportation improvement mentioned above.* As an example, suppose there has been a debate in the local papers as to whether a new traffic signal should be installed on an arterial roadway. Different stakeholders each hold different positions regarding whether a signal should be installed, with different teams representing different vested interests, including the perspectives of developers, concerned citizens, transportation officials, elected officials, the local planning board, advocacy groups, and key business groups.



- *senior citizens* favor the installation of a traffic signal to enable them to safely cross the street between the shopping mall and the senior citizens center. Furthermore, the signal should have sufficient walking time (during an all red phase) to accommodate lower than average walking speeds of approximately 1 meter/second.
  
- *shopping mall proprietors* also favor the installation of a signal as a way to increase access for their property and to encourage circulation within the mall. However, they slightly disagree with the senior citizen center in that they don't want an all red phase for pedestrian movement, since most people who come to the mall drive their anyhow.
  
- *commuters from the private residences* who work in the employment center don't want the signal at all: the signal will just delay their travels!

# NATIONAL STANDARDS

## National Science Education Standards

### Grades 5-8

#### Science as Inquiry

- Use technology and mathematics to improve investigations and communications.
- Think critically and logically to make the relationships between evidence and explanations.

#### Science and Technology

- Identify Appropriate Problems for Technological Design: Students should develop their abilities by identifying a specified need, considering its various aspects, and talking to different potential users or beneficiaries. They should appreciate that for some needs, the cultural backgrounds and beliefs of different groups can affect the criteria for a suitable product.
- Understanding About Science and Technology: Technological designs have constraints. Some constraints are unavoidable, for example, properties of materials, or effects of weather and friction; other constraints limit choices in the design, for example, environmental protection, human safety, and aesthetics

### Grades 9-12

#### Science as Inquiry

- Use technology to improve investigations and communications.
- Formulate and revise scientific explanations and models using logic and evidence.
- Recognize and analyze alternative explanations and models.

#### Science and Technology

- Identify a Problem: Students should be able to identify new problems or needs and to change and improve current technological designs.
- Propose Designs and Choose Between Alternative Solutions: Students should demonstrate thoughtful planning for a piece of technology or technique. Students should be introduced to the roles of models and simulations in these processes.

- Communicate the Problem, Process, and Solution: Students should present their results to students, teachers, and others in a variety of ways, such as orally, in writing, and in other forms

### **Science in Personal and Social Perspectives**

Population Growth: Populations can increase with effects on resource use and environmental pollution.

## **National Education Technology Standards**

### **Basic operations and concepts**

Students are proficient in the use of technology.

### **Social, ethical, and human issues**

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

### **Technology productivity tools**

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models

### **Technology problem-solving and decision-making tools**

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

# **Standards for Technological Literacy for the International Technology Education Association**

## **Design**

Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.

## **Abilities of a technological World**

Standard 12: Students will develop abilities to use and maintain technological products and systems.

## **The Designed World**

Standard 18: Students will develop an understanding of and be able to select and use transportation technologies.

Standard 17: Students will be able to select and use information and communication technologies.

Standard 20: Students will develop an understanding of and be able to select and use construction technologies.

# **SIMCITY & PLANNING**

## **STUDENT HANDOUTS**

# SIMCITY & PLANNING ACTIVITY PREP INSTRUCTIONS

## PROCEDURE

Assuming the SIMCITY software as well as the Tracville files have been loaded into the computer, insert the SIMCITY CD ROM and double click on the SIMCITY program



icon located in the folder on your hard drive.

Once the program is running you may click anywhere on the screen for the introductory movie to stop. You should now have a menu that looks like this:



From this menu select **Load City** and your screen should display:



Select **Tracville** and click the check mark on the bottom right.



Your next step is to save your city under a new name so the original file will remain intact.

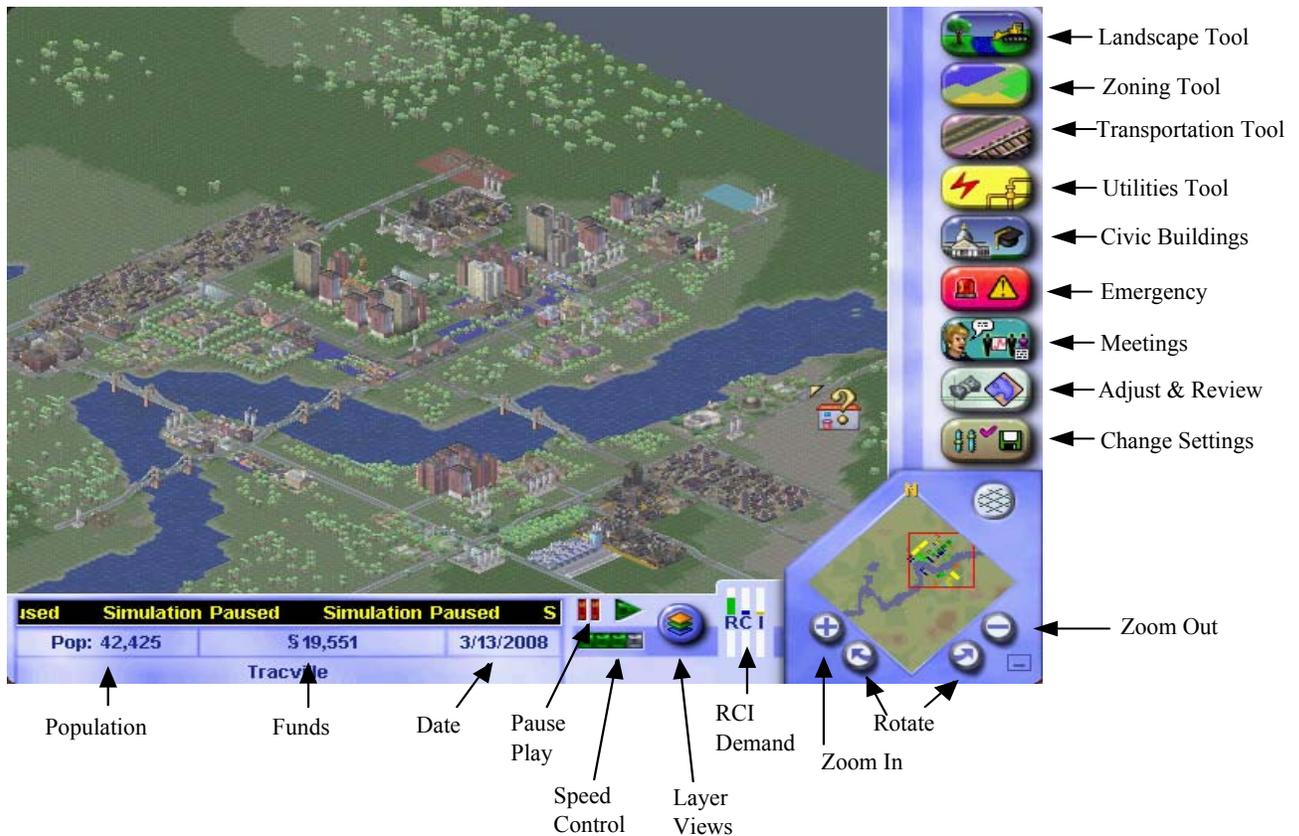
To do this click on the bottom right-hand tool button and select the **Save As** option:



Select this icon and then choose the **Save As** icon.



Type in a new name for the file, click the check mark and you will return back to the opening screen for the city of Tracville.



The primary tool buttons for the main screen of SIMCITY are presented in the image above. Additional details can be found in the reference manual accompanying the software package. The ones used most often for the purposes of the TRACPAC activities will be outlined and discussed below. In addition to the on screen choices there are ‘Hot Keys’ that will allow keyboard control instead of the mouse. Examples are ‘arrow’ keys move you around in the city view, ‘+/-’ keys zoom in and out, and ‘page up’/‘page down’ keys rotate the view. A full list of all ‘Hot Keys’ will be found in the appendix of this module.

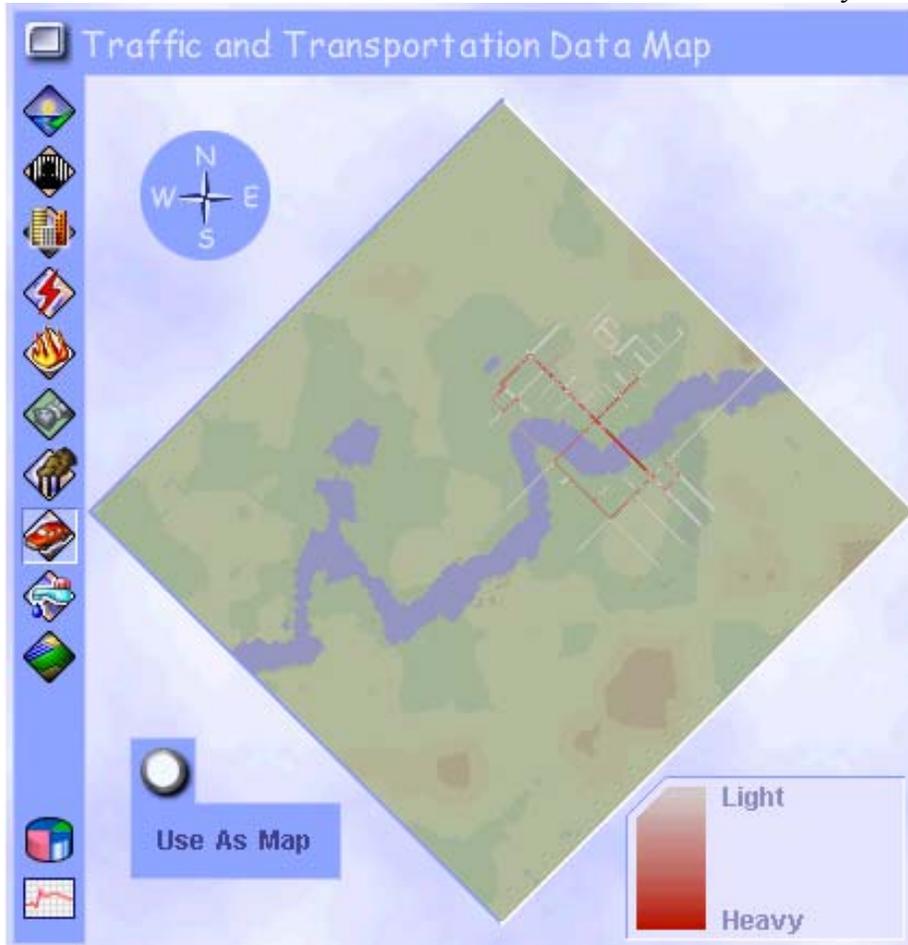
The first step of each activity is to investigate the ‘health’ of your city. What does the transportation situation look like, pollution and environmental concerns, education, fire hazards, water and energy supplies, etc. How happy or unhappy are the Sims that live there? As you investigate these issues using the tools described below, you might consider taking some notes of problems that you would like to try and fix.

To start the investigation click on the **Adjust & Review** button:





When you click the **Adjust & Review** button, you will see a new menu bar of choices. Select the View Data button with your mouse and click.



A map such as this allows you to display specific information as an overlay on your city. In this example all of the roads are shown with a color code indicating the amount of traffic using the highways at this point in time. As traffic conditions improve or deteriorate, the coloration of each road will change.

Additional buttons on the left hand side of the **View Data** map will give you additional information as outlined below. For any map you can also choose to have that particular map as your **Navigation Map** by clicking on the **Use As Map** button.



The **Aura** button shows the overall happiness of various areas of your city.



The **Crime** button shows you where crime is a problem as well as where the police stations are located. A dot with a circle around it represents the station and its precinct.



The **Density** button allows you to see the population densities of each zone.



The **Power** button tells you what areas need or have power in the city.



The **Flammability** button shows how likely fires may happen in particular areas. A dot with a circle around it represents a fire station and its coverage.



The **Land Value** button shows the various land values throughout the city.



The **Pollution** button displays areas of air pollution, water pollution, and garbage problems.



The **Traffic and Transportation** button displays traffic density for both road and rail.



The **Water Supply** button indicates which areas have water or not.



The **Zones** button shows the location and area of each kind of zone in the city.



The **Charts and Graphs** buttons allow you to view various data over periods of time.

If you now close out the **View Data** screen and return to the main screen, you will find a **Layer Views** button that will allow you to impose various data views directly on the city view of your main screen. This data view of your city will remain in tact through zooms and rotations of your view until you return to the default display choice from the **View City Layers** screen.



The **Layer Views** button is located near the bottom of the main screen.

Another important source of information within the **Adjust & Review** menu is the **Budget**.



Be sure you select this button to see the status of your city's income and expenditures, including amounts allocated for specific purposes such as road maintenance. Any choices made for trying to improve your city's well-being always involves a price tag that must be taken into consideration. Selecting the **Budget** button gives you the following screen:

Budget		Expenditures	Income
2008 Budget March 2008	Adjust:	Yr. To Date Expense	Year End Estimate
Ordinances		-\$54	-\$324
Neighbor Deals		\$0	\$0
Loans		\$0	\$0
Education		-\$530	-\$3,180
Public Health		-\$100	-\$600
Fire		\$0	\$0
Roads		-\$20	-\$120
Police		\$0	\$0
Mass Transit		\$0	\$0
Year to Date Income		\$1,681	
Estimated Income			\$10,131
Year to Date Expense		-\$704	
Estimated Expense			-\$4,224
Year to Date Cash Flow		\$977	
Estimated Cash Flow			\$5,907
Current Funds			\$19,551
End of Year Funds			\$25,458

The Expenditures table indicates how much money is being spent in each category of the city’s budget. Selecting the **Loans** button gives you information regarding loans to the city, as well as allowing you to take out loans if needed. Loans may be necessary to make improvements to you city, but one must use caution to balance loan expenditures with city income. You should not exceed \$30,000 in loans, if possible.

Clicking the mouse on a slider allows you to adjust the amount allocated to Education, Health, Fire, Roads, Police, and Mass Transit. Clicking on the **Question Mark** next to one of these categories connects you with the city advisor for that area. For example, if you click on the Question Mark next to the Roads category, you would get the following screen:

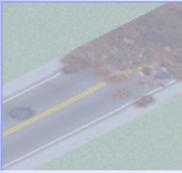
**Transportation Advisor**

**Roads Barely Useable**

Road repair in Tracville has gotten worse. The traffic jams make everyone so mad I'm afraid to go outside.

There's not enough money in the road budget no matter how many different ways I count it. My department needs more money to keep the roads from getting worse, pure and simple. And if you want us to repair all the potholes, we'll need a lot more.

Like my Uncle George used to say, "It's easier to keep things fixed than it is to repair them after they break."




**Moe Biehl**

The Income button at the top of the budget table gives you information about your city's sources of income:

**Budget**      **Expenditures**      **Income**

2008 Budget      Adjust      Year to Date      Year End      Meet  
 March 2008           Income      Estimate      Advisor:

Ordinances		\$ 0	\$ 0	
Neighbor Deals		\$ 0	\$ 0	
Business Deals		\$ 0	\$ 0	
Transit Fares		\$ 0	\$ 0	
Disaster Relief		\$ 0	\$ 0	
Residential Tax Rate	12	\$ 1,237	\$ 7,467	
Commercial Tax Rate	5	\$ 79	\$ 479	
Industrial Tax Rate	5	\$ 365	\$ 2,185	
Year to Date Income		\$ 1,681	\$ 10,131	
Estimated Income			\$ 10,131	
Year to Date Expense		-\$ 704	-\$ 4,224	
Estimated Expense			-\$ 4,224	
Year to Date Cash Flow		\$ 977	\$ 5,907	
Estimated Cash Flow			\$ 5,907	
Current Funds			\$ 19,551	
End of Year Funds			\$ 25,458	

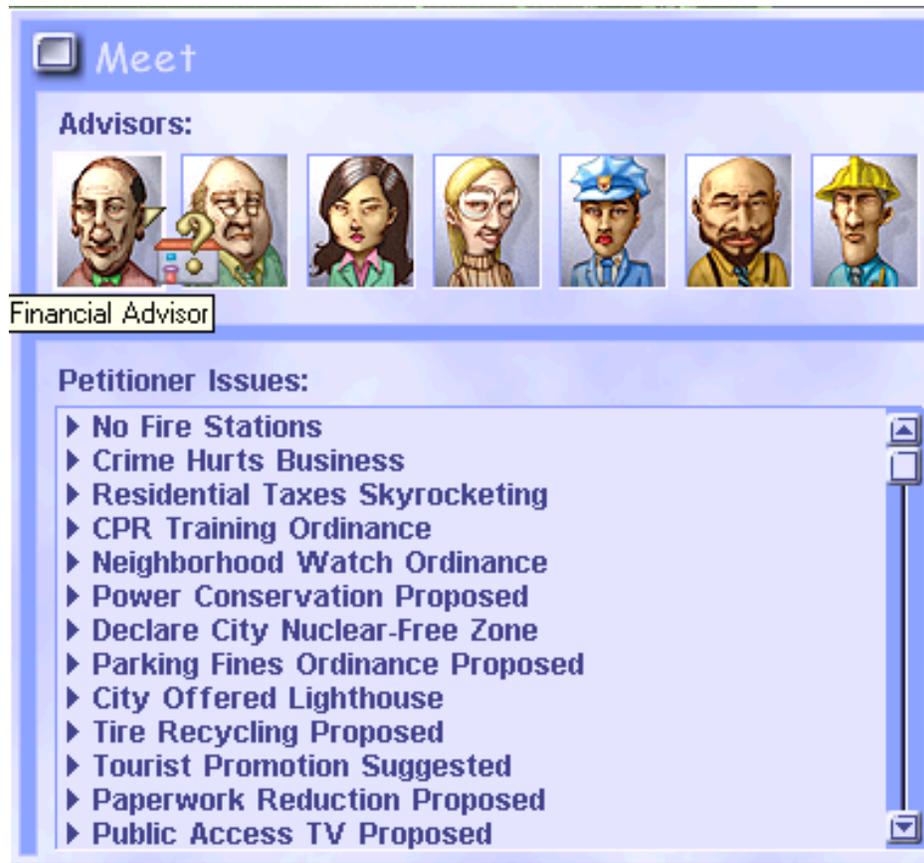
Meet Financial Advisor:

This table allows you to adjust your tax rates for various groups, as well as investigate possible deals with neighbors and business. Again the Question Mark buttons will yield the advise of an advisor in that area.

The next most important source of information for determining the status of your city is to meet with the city advisors and petitioners. These individuals can offer good advice about current situations as well as advice for the future.



Select the **Meeting** button from the menu bar on the main screen to meet with your petitioners and advisors. The screen you get after selecting this button should look like:



Clicking on a **Petitioner Issue** will give you information details about the particular issue they are requesting. Although sometimes it might be an offer that could yield the city a profit, it usually will cost the city to address most of the issues brought before it. Your decision must be based on a combination of the issue's merits with its expense.

Clicking on the **image** of one of the advisors at the top of this menu will give you your advisor's recommendations for issues within their domain. You will also discover a source of general information about the domain of each advisor within the window that arises when you make the selection. For example, to learn more about how to deal with Tracville's **budget**, you would click on the image of the Financial Advisor, as shown above.



The window will open with current news topics available for discussion. However, a pull down menu gives you additional choices, such as Briefings. Selecting Briefings will give you a brief **Tutorial** on how to deal with Budget issues within the SIMCITY format. Other tutorials for different areas of the simulation are available by the same process.

If you have explored the menus described in this section, you should now have a good feeling for the state of affairs for the city of Tracville. Any notes you may have taken will assist you in making more prompt and efficient decisions regarding improving the health of this city in the activities that follow.



An example of a scene in Tracville that could be leading to traffic congestion is shown above. Coupled with roads in poor condition, schools placed on the main thoroughfare and at a major intersection can impede traffic flow with their slower speed zones. Roads can be repaired immediately by rebuilding, or will improve over time with a higher road maintenance budget. Schools can be moved to locations farther from the main road itself, or the road can be relocated.



The same intersection in this scene shows the relocation of the school, the addition of wider roads, and a bus station added for mass transit.

# **TRACVILLE NOTES :**

# **SIMCITY & PLANNING**

## **ACTIVITY 1:**

### **TRANSPORTATION**

#### **OBJECTIVE**

The objective is to improve transportation problems within the city, improve the overall health or 'aura' of the city, as well as promote a growth of twenty-five percent of the city's population. This should be accomplished within a three year period of time.

#### **BACKGROUND**

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on transportation decisions.

#### **MATERIALS**

Computer with SIMCITY and Tracville files installed  
SIMCITY CD  
Instruction Sheets  
Question Sheet

#### **PROCEDURE**

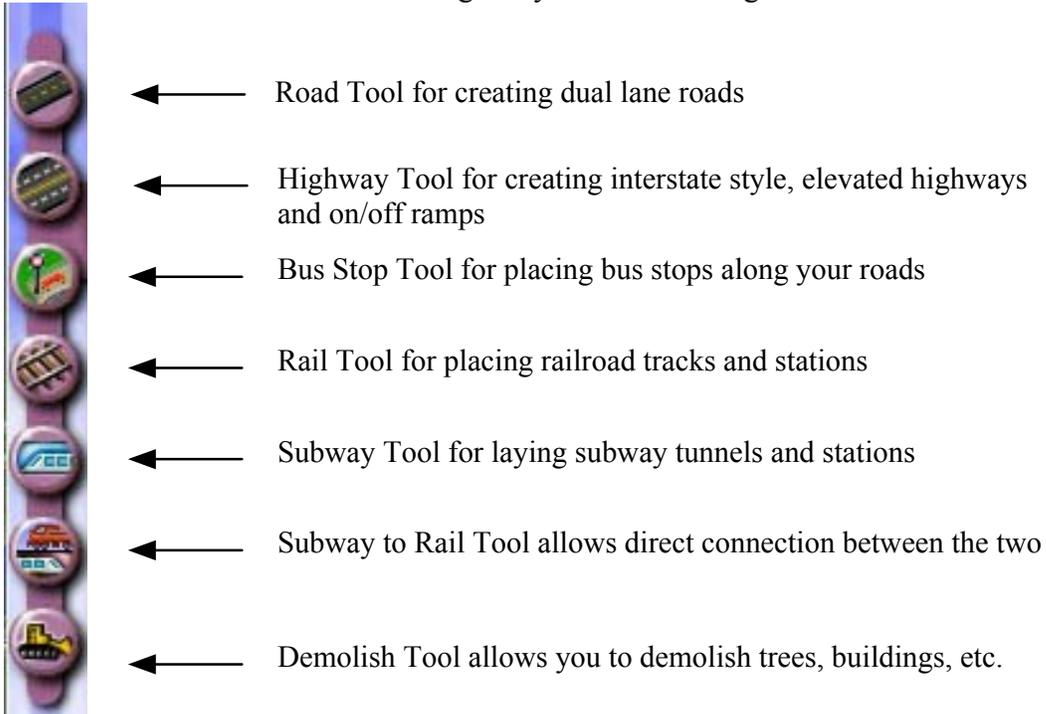
Assuming you have just completed the **Activity Prep** and have not modified your Tracville file, you can begin the first steps below. If you are starting at a different time or have modified your file, you should reload Tracville and save under a new name before you begin. Follow the instructions at the beginning procedure for the **Activity Prep**.



From the main screen of Tracville select the **Transportation Tool**. and you should now see a new toolbar of transportation choices:



A closer look at the new tool menu gives you the following choices:



Each of these tools when selected and moved across your city will create a 'drop shadow'. A blue drop shadow shows where it can be placed, and a red one shows where it cannot. Roads and rails can be placed one tile at a time or you can click and drag in a straight line or diagonal to complete a longer stretch. Trees or buildings that might get in your way can be demolished with the **Demolish Tool** before you lay the road. If you hold

down the **shift** key before releasing the mouse button, the placement of any route will be cancelled.

Building a road, highway, or rail bridge across a body of water is accomplished by dragging the drop shadow across the body until the blue highlight lets you know that you have been successful. City engineers will then let you know the cost of the span. If you accept the cost, they will construct the bridge. Hint: your bridge span must be straight and perpendicular to the water.

Road intersections are automatically created by the city engineers whenever you build a road that crosses an existing road. Highways may be built over roads, but you must remember to create on-ramps to allow access to the highway. To build an on-ramp, use the on-ramp option from within the highway button. Click on a tile at the corner of a road intersection and the engineers will construct the ramp. Hint: you must have a minimum of three tiles running adjacent to the highway to allow room for the ramp.

If you wish to utilize bus transportation as a mass transit system, you must place bus stops along the sides of your roads at points that your Sims will find convenient. Do not space them too far apart.

Trains for mass transit are more expensive than roads, but reduce not only traffic but pollution as well. Once the train track is laid, you must place train stations on tiles that touch the track. Failure to do this will mean that none of your city dwellers will be able to use the train system that you have constructed.

Subways are obviously another method of dealing with both traffic and pollution reduction, though again more costly than roads. The **Subway Tool** will automatically turn your screen into an underground view of Tracville, although it will still maintain colors of tiles indicating the zoning areas. Brown is open terrain (the darkest brown marks where you cannot build subways), gray indicates above ground rail or road, dull orange is zoned but not developed and bright orange is zoned and developed. Again Sims will be unable to use the subway system unless you provide subway stations, which must be placed next to the subway rails.

An additional option involving both train and subway transport is to construct a **Subway to Rail Connection**. You will find this option as a separate button under the Transportation tool menu.

Certainly constructing roads, train and subway systems are expenses that must fall with your city finances. However, do not forget that construction of transportation facilities also bears with it the expense of maintenance. If your **road budget** is insufficient for road maintenance, your roads, highways and bridges will start to deteriorate and Sims will no longer use them. The same is true for your **mass transit budget**. The mass transit budget pays for the maintenance of rail and subway track, as well as the salaries of conductors and bus drivers. If this budget is too low, not only will the facilities deteriorate, but you could actually face a transit workers strike.

For additional advice on dealing with transportation issues, consider consulting with your transportation advisor. To receive this consultation, select the **Meeting** button from the main menu and click on the transportation advisor selection, which is the second person from the left on the menu.

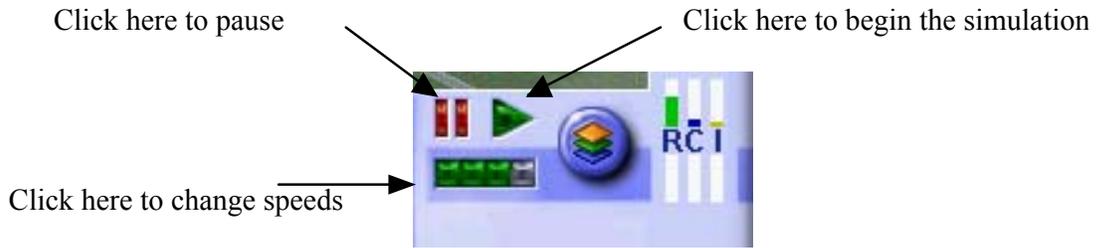


From this menu you can not only check the current news topics regarding transportation, but you can also receive helpful advice by selecting **Briefings** from the pull down menu in this window.



These briefings will give you additional information on how to deal with some of the transportation issues.

From the moment you opened and renamed the Tracville file, the simulation was in the 'paused' mode. When you have made the changes you feel will help improve the transportation and other issues confronting your city, you are ready to view the results of your labor. To discover the effect your changes have made, you need to now let the simulation 'run'. To meet the objectives of this activity your city needs to run for three years. You may pause at any time to reconsider or make additional changes, as long as you stop this exercise at the end of the three year period.



At the end of the three year period record on the following data sheet the requested information regarding your city. This information may be submitted or shared with the class or other groups as requested by your teacher.

If you have time to view it, there is at least one person's solution to Tracville's problems using transportation decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleTrans. Do not save this file if any changes are made to it.

## ACTIVITY 1 - QUESTIONS AND CONCLUSIONS

1. What was the population of Tracville at the end of three years?

---

2. How successful were you in improving traffic congestion and other transportation issues?

---

3. How successful were you in improving the over all 'aura' or health of the city?

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---

4. What were the primary methods you used in solving the transportation problems? (e.g. roads, highways, trains, subways)

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5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds \_\_\_\_\_ Income \_\_\_\_\_

Expenses \_\_\_\_\_ Loans \_\_\_\_\_

6. If you were to repeat this exercise, what would you do differently?

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7. Be prepared to share this information with your class or other groups.

# SIMCITY & PLANNING

## ACTIVITY 2: ZONING

### OBJECTIVE

The objective is to improve transportation problems within the city, improve the overall health or 'aura' of the city, as well as promote a growth of twenty-five percent of the city's population. This should be accomplished within a three year period of time.

### BACKGROUND

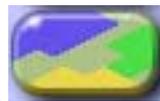
All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on zoning decisions.

### MATERIALS

Computer with SIMCITY and Tracville files installed  
SIMCITY CD  
Instruction Sheets  
Question Sheet

### PROCEDURE

Assuming you have just completed the **Activity Prep** and have not modified your Tracville file, you can begin the first steps below. If you are starting at a different time or have modified your file, you should reload Tracville and save under a new name before you begin. Follow the instructions at the beginning procedure for the **Activity Prep**.



From the main screen of Tracville select the **Zone Tool** and you should now see a new toolbar of zoning choices:

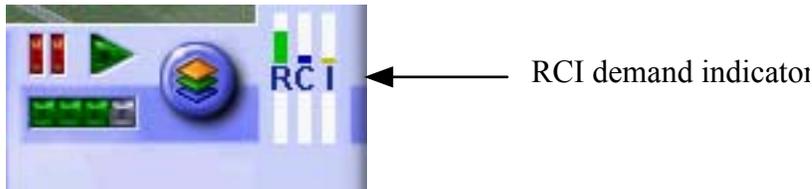


A closer look at the new tool menu gives you the following choices:

-  ← Residential Tool for zoning areas as residential growth only
-  ← Commercial Tool for zoning areas as commercial growth only
-  ← Industrial Tool for zoning areas as industrial growth only
-  ← Landfill Tool to create area landfills for garbage disposal
-  ← Seaport Tool to allow port development on water access areas
-  ← Airport Tool for airport development
-  ← De-zone Tool to allow for rezoning of current zones
-  ← Demolish Tool will destroy or remove any Sim-made object

Each of the first three tools from this menu has a pull down menu of choices. They will allow you to zone an area as light, medium, or dense for a given region. Zones can be established one tile click at a time or can be dragged to cover a larger area. When you zone with these tools, you are simply placing restrictions on what kind of buildings and how dense the zones can get. What actually gets built in a zoned area is up to the Sims. An area will only develop to its fullest potential when there is the necessary demand.

One way of determining existing demand is by viewing the Residential – Commercial – Industrial demand indicator.



When the meter, or bar, for a zone type is up, that means that your city could use more of that type of zone. When the meter is down, you have a surplus of that zone.

The **Landfill Tool** creates the cheapest form of garbage disposal. However, they destroy the land they are built on and lower the land value of surrounding areas.

The **Seaport Tool** zones for the potential for a seaport to be constructed by the Sims. This zone can help the growth of industrial and commercial zones and also promote an alternative for garbage disposal for your city. A seaport must have water access to a neighbor and be at least 2 x 6 tiles to develop.

The **Airport Tool** can help your commercial districts to grow by promoting travel. An airport needs a minimum of 3 x 5 tiles in order to develop.

The **De-zone Tool** allows you to remove any pre-existing zone, hence allowing you to re-zone that area. To de-zone an area there can be no buildings or other construction in place, therefore you may need to demolish the area first.

The **Demolish Tool** allows you to destroy or remove any Sim made object.

For additional advice on dealing with zoning issues, consider consulting with your City Planning advisor. To receive this consultation, select the **Meeting** button from the main menu and click on the City Planner advisor selection, which is the third person from the left on the menu.



From this menu you can not only check the current news topics regarding transportation, but you can also receive helpful advice by selecting **Briefings** from the pull down menu in this window.

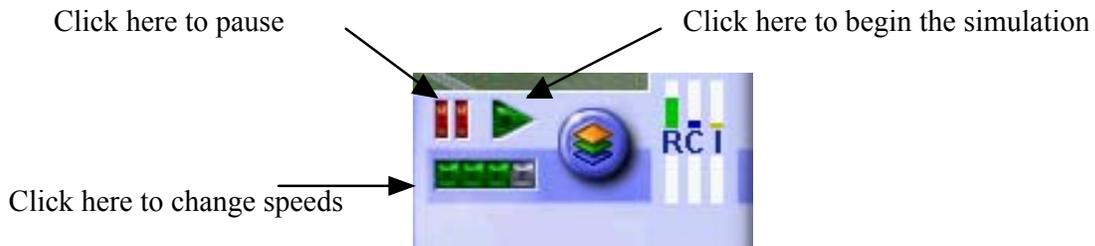


These briefings will give you additional information on how to deal with some of the zoning and planning issues.

In many instances in real life the zoning of property has a great influence on transportation as well as other issues. Industrial and commercial properties will not grow and prosper if they are not in close proximity to adequate roads. Residential housing should be likewise close enough to either public or private transportation in order to reach their workplace, schools and businesses in a reasonable amount of time. Proper zoning and re-zoning decisions can aid in increasing the efficiency of current roads and transportation systems, as well as improve the inhabitants' satisfaction with their daily plight. Hopefully, your efforts in manipulating the zoning of Tracville will be successful in improving not only transportation issues, but also the overall 'aura' of the city.

From the moment you opened and renamed the Tracville file, the simulation was in the 'paused' mode. When you have made the changes you feel will help improve the transportation and other issues confronting your city, you are ready to view the results of your labor. To discover the effect your changes have made, you need to now let the

simulation 'run'. To meet the objectives of this activity your city needs to run for three years. You may pause at any time to reconsider or make additional changes, as long as you stop this exercise at the end of the three year period.



At the end of the three year period record on the following data sheet the requested information regarding your city. This information may be submitted or shared with the class or other groups as requested by your teacher.

If you have time to view it, there is at least one person's solution to Tracville's problems using zoning decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleZone Do not save this file if any changes are made to it.

## ACTIVITY 2 - QUESTIONS AND CONCLUSIONS

1. What was the population of Tracville at the end of three years?

---

2. How successful were you in improving traffic congestion and other transportation issues?

---

3. How successful were you in improving the over all 'aura' or health of the city?

---

---

4. Describe the primary methods you used in trying to make zoning decisions have an impact on transportation improvement.

---

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5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds \_\_\_\_\_ Income \_\_\_\_\_

Expenses \_\_\_\_\_ Loans \_\_\_\_\_

6. If you were to repeat this exercise, what would you do differently?

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---

---

7. Be prepared to share this information with your class or other groups.

# **SIMCITY & PLANNING**

## **ACTIVITY 3:**

### **TRANSPORTATION**

### **& ZONING**

#### **OBJECTIVE**

The objective is to improve transportation problems within the city, improve the overall health or 'aura' of the city, as well as promote a growth of twenty-five percent of the city's population. This should be accomplished within a three year period of time.

#### **BACKGROUND**

All cities in real life, as well as in this simulation software, have their share of problems. Common among those problems are issues that deal with transportation and the impact it has on the growth of the city and the well being of its inhabitants. Solving the problems usually depends on many issues and often necessitates decisions in many areas. For the purposes of this activity, we will focus on making simultaneous decisions involving both transportation and zoning.

#### **MATERIALS**

Computer with SIMCITY and Tracville files installed  
SIMCITY CD  
Instruction Sheets  
Questions

#### **PROCEDURE**

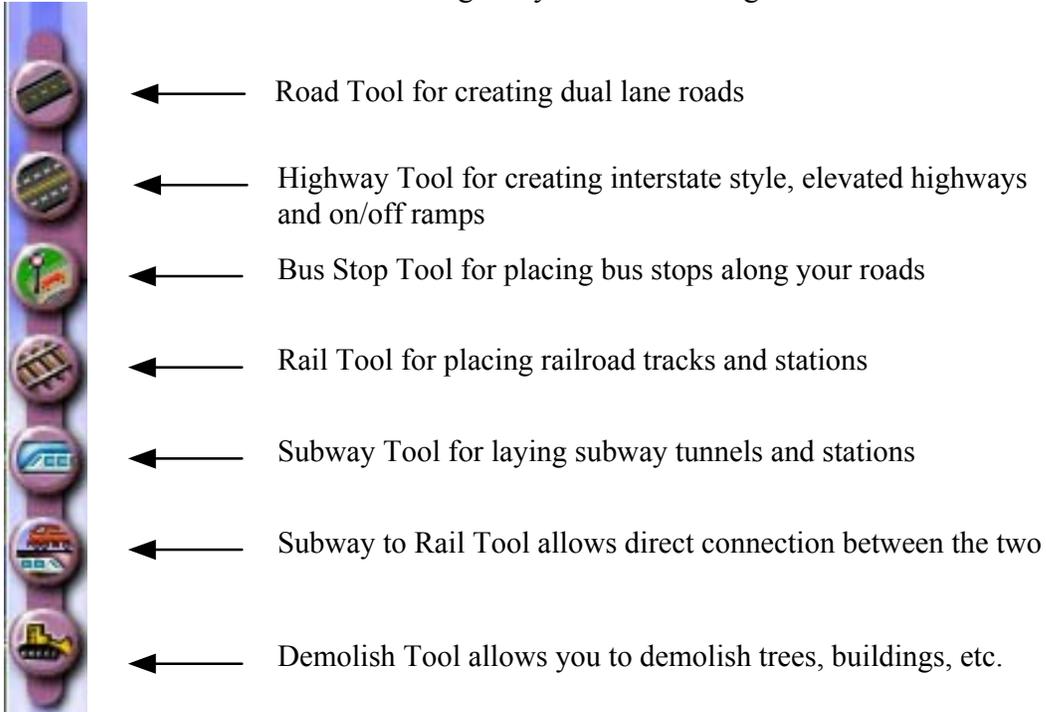
Assuming you have just completed the **Activity Prep** and have not modified your Tracville file, you can begin the first steps below. If you are starting at a different time or have modified your file, you should reload Tracville and save under a new name before you begin. Follow the instructions at the beginning procedure for the **Activity Prep**.



From the main screen of Tracville select the **Transportation Tool**. and you should now see a new toolbar of transportation choices:



A closer look at the new tool menu gives you the following choices:



Each of these tools when selected and moved across your city will create a 'drop shadow'. A blue drop shadow shows where it can be placed, and a red one shows where it cannot. Roads and rails can be placed one tile at a time or you can click and drag in a straight line or diagonal to complete a longer stretch. Trees or buildings that might get in your way can be demolished with the **Demolish Tool** before you lay the road. If you hold down the **shift** key before releasing the mouse button, the placement of any route will be

cancelled.

Building a road, highway, or rail bridge across a body of water is accomplished by dragging the drop shadow across the body until the blue highlight lets you know that you have been successful. City engineers will then let you know the cost of the span. If you accept the cost, they will construct the bridge. Hint: your bridge span must be straight and perpendicular to the water.

Road intersections are automatically created by the city engineers whenever you build a road that crosses an existing road. Highways may be built over roads, but you must remember to create on-ramps to allow access to the highway. To build an on-ramp, use the on-ramp option from within the highway button. Click on a tile at the corner of a road intersection and the engineers will construct the ramp. Hint: you must have a minimum of three tiles running adjacent to the highway to allow room for the ramp.

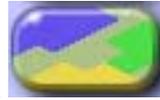
If you wish to utilize bus transportation as a mass transit system, you must place bus stops along the sides of your roads at points that your Sims will find convenient. Do not space them too far apart.

Trains for mass transit is more expensive than roads, but reduces not only traffic but pollution as well. Once the train track is laid, you must place train stations on tiles that touch the track. Failure to do this will mean that none of your city dwellers will be able to use the train system that you have constructed.

Subways are obviously another method of dealing with both traffic and pollution reduction, though again more costly than roads. The **Subway Tool** will automatically turn your screen into an underground view of Tracville, although it will still maintain colors of tiles indicating the zoning areas. Brown is open terrain (the darkest brown marks where you cannot build subways), gray indicates above ground rail or road, dull orange is zoned but not developed and bright orange is zoned and developed. Again, Sims will be unable to use the subway system unless you provide subway stations, which must be placed next to the subway rails.

An additional option involving both train and subway transport is to construct a **Subway to Rail Connection**. You will find this option as a separate button under the Transportation tool menu.

Certainly constructing roads, train and subway systems are expenses that must fall with your city finances. However, do not forget that construction of transportation facilities also bears with it the expense of maintenance. If your **road budget** is insufficient for road maintenance, your roads, highways and bridges will start to deteriorate and Sims will no longer use them. The same is true for your **mass transit budget**. The mass transit budget pays for the maintenance of rail and subway track, as well as the salaries of conductors and bus drivers. If this budget is too low, not only will the facilities deteriorate, but you could actually face a transit workers strike.



From the main screen of Tracville select the **Zone Tool** and you should now see a new toolbar of zoning choices:

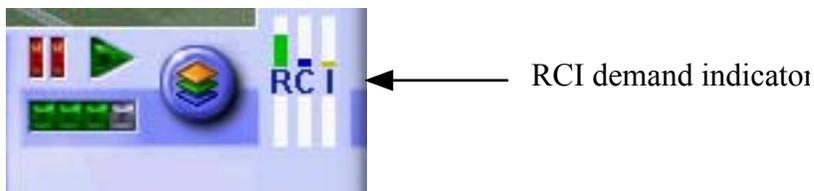


A closer look at the new tool menu gives you the following choices:



Each of the first three tools from this menu has a pull down menu of choices. They will allow you to zone an area as light, medium, or dense for a given region. Zones can be established one tile click at a time or can be dragged to cover a larger area. When you zone with these tools, you are simply placing restrictions on what kind of buildings and how dense the zones can get. What actually gets built in a zoned area is up to the Sims. An area will only develop to its fullest potential when there is the necessary demand.

One way of determining existing demand is by viewing the Residential – Commercial – Industrial demand indicator.



When the meter, or bar, for a zone type is up, that means that your city could use more of that type of zone. When the meter is down, you have a surplus of that zone.

The **Landfill Tool** creates the cheapest form of garbage disposal. However, they destroy the land they are built on and lower the land value of surrounding areas.

The **Seaport Tool** zones for the potential for a seaport to be constructed by the Sims. This zone can help the growth of industrial and commercial zones and also promote an

alternative for garbage disposal for your city. A seaport must have water access to a neighbor and be at least 2 x 6 tiles to develop.

The **Airport Tool** can help your commercial districts to grow by promoting travel. An airport needs a minimum of 3 x 5 tiles in order to develop.

The **De-zone Tool** allows you to remove any pre-existing zone, hence allowing you to re-zone that area. To de-zone an area there can be no buildings or other construction in place, therefore you may need to demolish the area first.

The **Demolish Tool** allows you to destroy or remove any Sim made object as explained previously.

In many instances in real life the zoning of property has a great influence on transportation as well as other issues. Industrial and commercial properties will not grow and prosper if they are not in close proximity to adequate roads. Residential housing should be likewise close enough to either public or private transportation in order to reach their workplace, schools and businesses in a reasonable amount of time. Proper zoning and re-zoning decisions can aid in increasing the efficiency of current roads and transportation systems, as well as improve the inhabitants' satisfaction with their daily plight. Hopefully, your efforts in manipulating the zoning of Tracville will be successful in improving not only transportation issues, but also the overall 'aura' of the city.

Additional information involving the use of transportation and zoning tools, as well as gaining advice for their implementation, can be found by consulting with the appropriate advisors for these areas. To consult with the Transportation Advisor and the City Planner, select the **Meeting** button from the main menu and click on the advisor with which you wish to consult.



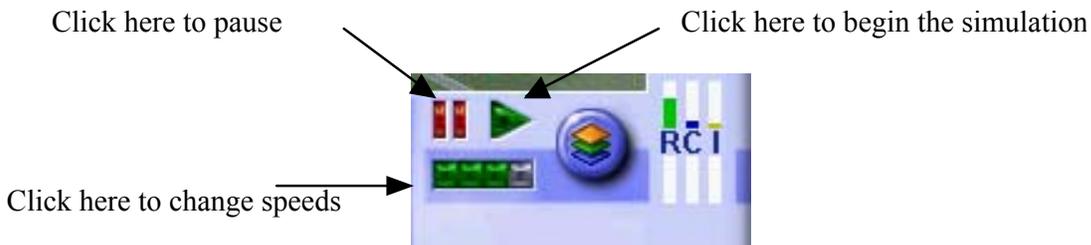
From these menus you can not only check the current news topics regarding transportation and zoning, but you can also receive helpful advice by selecting **Briefings** from the pull down menus in these windows.



These briefings will give you additional information on how to deal with some of the transportation and zoning tools and issues.

Although oftentimes in the real world, transportation and zoning issues are made without proper consulting and cross checking with each department, the most efficient and best results usually occur when these departments work together. Try using both sets of tools to make the wisest decisions to improve your city.

From the moment you opened and renamed the Tracville file, the simulation was in the 'paused' mode. When you have made the changes you feel will help improve the transportation and other issues confronting your city, you are ready to view the results of your labor. To discover the effect your changes have made, you need to now let the simulation 'run'. To meet the objectives of this activity your city needs to run for three years. You may pause at any time to reconsider or make additional changes, as long as you stop this exercise at the end of the three year period.



At the end of the three year period record on the following data sheet the requested information regarding your city. This information may be submitted or shared with the class or other groups as requested by your teacher.

If you have time to view it, there is at least one person's solution to Tracville's problems using both transportation and zoning decisions found in the Cities folder. To look at this solution, select the **Change Settings and Exit** button from the main toolbar and load the new city TracvilleTransZone. Do not save this file if any changes are made to it.

## **ACTIVITY 3 -QUESTIONS AND CONCLUSIONS**

1. What was the population of Tracville at the end of three years?

---

2. How successful were you in improving traffic congestion and other transportation issues?

---

3. How successful were you in improving the over all 'aura' or health of the city?

---

---

4. Describe the primary methods you used to improve transportation issues through the zoning and transportation decisions made.

---

---

5. At the end of your time period, what was the financial picture of your city? In other words, were there large debts, was the city operating in the black or red?

Available Funds \_\_\_\_\_ Income \_\_\_\_\_

Expenses \_\_\_\_\_ Loans \_\_\_\_\_

6. If you were to repeat this exercise, what would you do differently?

---

---

---

7. Be prepared to share this information with your class or other groups.

# MACINTOSH HOT KEYS

## SIMCITY 3000

### HOT KEYS

- [+] - Zoom In
- [-] - Zoom Out
- [1] - Furthest Zoom Level
- [2] - Zoom Level 2
- [3] - Zoom Level 3
- [4] - Zoom Level 4
- [5] - Closest Zoom Level
- [Page Down] - Rotate City View Clockwise
- [Page Up] - Rotate City View Counter Clockwise
- ←/↑/→/↓ - Scroll City View
- [Spacebar] - Center City View On Cursor
- [G] - Terrain Grid On/Off
- [Esc] - Close Opened Window or Return To Centering Tool
- [/] - Pause or Unpause Simulation
- [.] - Increase Speed One Level
- [,] - Decrease Speed One Level
- [U] - Plant Trees
- [Shift]+[U] - Create Surface Water
- [Q] - Zone Light Residential
- [W] - Zone Medium Residential
- [E] - Zone Dense Residential
- [A] - Zone Light Commercial
- [S] - Zone Medium Commercial
- [D] - Zone Dense Commercial
- [Z] - Zone Light Industrial
- [X] - Zone Medium Industrial
- [C] - Zone Dense Industrial
- [Y] - Zone Landfill
- [V] - De-Zone
- [B] - Demolish Tool
- [Alt]+ Mouse Button - Demolish Selected Tile
- [L] - Lay Power Lines
- [Ctrl]+[E] - Open Power Plant Window
- [I] - Lay Water Pipes
- [Ctrl]+[I] - Open Water Structures Window
- [Ctrl]+[G] - Open City Layer Views Window
- [R] - Build Road
- [Shift]+[R] - Build Highway
- [Alt]+[R] - Build Bus Stop
- [T] - Lay Rail
- [Alt]+[T] - Build Train Station
- [Shift]+[T] - Lay Subway Rail
- [Shift]+[Alt]+[T] - Build Subway Station
- [P] - Build Police Station
- [Shift]+[P] - Build Jail
- [F] - Build Fire Station
- [H] - Build Hospital
- [K] - Build School
- [Shift]+[K] - Build College
- [J] - Build Small Park
- [Shift]+[J] - Build Large Park
- [Ctrl]+[D] - Open Landmark Building Window
- [Ctrl]+[R] - Open Rewards And Opportunities Window
- HOLD [Shift]+ Mouse Button (on mouse up) - Cancel Action
- [Ctrl]+[A] - Open Meet Advisors/Petitioners Window
- [Ctrl]+[B] - Open Budget Window
- [Ctrl]+[W] - Open Neighbors Window
- [Ctrl]+[O] - Open Ordinances Window
- [Ctrl]+[M] - Open View Data Window
- [Ctrl]+[Y] - Open Waste Management Buildings Window
- [Ctrl]+ Mouse Button - Query Selected Tile
- [Ctrl]+[P] or [F4] - Open Preferences Window
- [Ctrl]+[L] or [F3] - Load Saved City
- [Ctrl]+[N] or [F5] - Start New City
- [Ctrl]+[F] or [F6] - Load Starter Town
- [Ctrl]+[T] or [F7] - Load Real City Terrain
- [Ctrl]+[S] or [F2] - Save City
- [Ctrl]+[Alt]+[S] or [F1] - Save City As...
- [Ctrl]+[Q] or [F1] - Exit *SimCity 3000*

# IBM HOT KEYS

## REFERENCE CARD

### HOT KEYS

- [+] - Zoom In
- [-] - Zoom Out
- [1] - Furthest Zoom Level
- [2] - Zoom Level 2
- [3] - Zoom Level 3
- [4] - Zoom Level 4
- [5] - Closest Zoom Level
- [Page Down] - Rotate City View Clockwise
- [Page Up] - Rotate City View Counter Clockwise
- ◆/□/∅/- - Scroll City View
- [Spacebar] - Center City View On Cursor
- [G] - Terrain Grid On/Off
- [Esc] - Close Opened Window or Return To Centering Tool
- [/] - Pause or Unpause Simulation
- [.] - Increase Speed One Level
- [,] - Decrease Speed One Level
- [U] - Plant Trees
- [Shift]+[U] - Create Surface Water
- [Q] - Zone Light Residential
- [W] - Zone Medium Residential
- [E] - Zone Dense Residential
- [A] - Zone Light Commercial
- [S] - Zone Medium Commercial
- [D] - Zone Dense Commercial
- [Z] - Zone Light Industrial
- [X] - Zone Medium Industrial
- [C] - Zone Dense Industrial
- [Y] - Zone Landfill
- [V] - De-Zone
- [B] - Demolish Tool
- [Alt]+Left Mouse Button - Demolish Selected Tile
- [L] - Lay Power Lines
- [Ctrl]+[E] - Open Power Plant Window
- [I] - Lay Water Pipes
- [Ctrl]+[I] - Open Water Structures Window
- [Ctrl]+[G] - Open City Layer Views Window
- [R] - Build Road
- [Shift]+[R] - Build Highway
- [Alt]+[R] - Build Bus Stop
- [T] - Lay Rail
- [Alt]+[T] - Build Train Station
- [Shift]+[T] - Lay Subway Rail
- [Shift]+[Alt]+[T] - Build Subway Station
- [P] - Build Police Station
- [Shift]+[P] - Build Jail
- [F] - Build Fire Station
- [H] - Build Hospital
- [K] - Build School
- [Shift]+[K] - Build College
- [J] - Build Small Park
- [Shift]+[J] - Build Large Park
- [Ctrl]+[D] - Open Landmark Building Window
- [Ctrl]+[R] - Open Rewards And Opportunities Window
- HOLD [Shift]+Left Mouse Button - Cancel Action
- [Ctrl]+[A] - Open Meet Advisors/Petitioners Window
- [Ctrl]+[B] - Open Budget Window
- [Ctrl]+[W] - Open Neighbors Window
- [Ctrl]+[O] - Open Ordinances Window
- [Ctrl]+[M] - Open View Data Window
- [Ctrl]+[Y] - Open Waste Management Buildings Window
- [Ctrl]+Left Mouse Button - Query Selected Tile
- [Ctrl]+[P] or [F4] - Open Preferences Window
- [Ctrl]+[L] or [F3] - Load Saved City
- [Ctrl]+[N] or [F5] - Start New City
- [Ctrl]+[F] or [F6] - Load Starter Town
- [Ctrl]+[T] or [F7] - Load Real City Terrain
- [Ctrl]+[S] or [F2] - Save City
- [Ctrl]+[Alt]+[S] or [F1] - Save City As...
- [Ctrl]+[Q] or [F1] - Exit *SimCity 3000*

# VOLUNTEER'S PAGE

The SIMCITY and Planning module is one of the strongest interdisciplinary modules: each activity mixes mathematics, engineering, and communications skills. This module works especially well for any transportation volunteer who has any experience from either (a) the use of simulation models or (b) the transportation planning sector (including land use coordination):

**A volunteer with any kind modeling experience** (whether traffic engineering models (e.g. CORSIM, Synchro, or HCS), land use models (DRAM/EMPAL or others), or transportation planning models (e.g. Minutp, TranPlan) could discuss any of the following with students:

- *the use of models in transportation engineering.* Students can be shown how Netsim (or other models) are used to study an intersection that is above capacity where one considers short range improvements such as modifying the cycle length, green time distribution, and signal coordination. Illustrations of how models are used to perform “what-if analyses” in the long term are useful, where metropolitan planning organizations (MPOs) or state Departments of Transportation forecast population and business growth for an area and then simulate the impacts of different types of transportation improvements, such as widening existing roads or shortening transit headways.
- *the limitations of models.* Volunteers with a pessimistic view of modeling can tell stories of how models can be manipulated to give a predetermined result, and why it is important to recognize the strengths and weaknesses of models, and why a decision maker or analyst wants to be able to understand the mathematics or logic that underlie a model).

A volunteer with any kind of planning experience (whether that experience comes from the public involvement side, the technical modeling side, the land use sector, or the perspective of local governments) can emphasize the intergovernmental relationships that are necessary to do effective transportation land use coordination. Specific examples include:

- *the diverse players under the Transportation Efficiency Act (TEA-21),* such as MPOs, state DOTs, Federal agencies, and planning district commissions. The critical link that students may not initially realize is that while models such as SIMCITY can simulate what will happen if one makes certain land use or transportation decisions, no improvements can take place unless there is agreement among these different bodies and the public. Thus cases where disagreement prevented transportation solutions from being implemented (e.g. where a locality may have desired a bypass and the state did not, or vice versa) are both interesting and educational.
- *the role of public involvement.* Especially for a government, social studies, or civics course, it is appropriate to show how public involvement can influence which transportation decisions are made. It is also useful to show cases where decisions were made in spite of opposition.
- *the role of alternative modes of transportation.* Volunteers can point out that historically state DOTs have focused on highway capacity expansions, and that TEA-21 and the predecessor ISTEA legislation emphasized other modes, to the delight of some persons and the dismay of others.